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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,350	10/16/2000	Tatsuki Kouwa	Q61020	9796

7590 12/04/2003

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EXAMINER

GONZALEZ, JULIO C

ARI UNIT	PAPER NUMBER
2834	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/688,350	KOUWA ET AL.	
Examiner	Art Unit	
Julio C. Gonzalez	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 08/616/03
06/04/03
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Sada et al.

Sada et al discloses a voltage control apparatus for a vehicle (see title) having a battery 3, an ignition switch 4, a light emitting element 5 connected in series with the switch 4, a resistor 141 for limiting current flowing through light emitting element 5 (column 6, lines 10-15) and the resistor being disposed between a transistor 140 and input terminal T3 (see figure 1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sada in view of Beyn.

Sada et al discloses a voltage control apparatus for a vehicle (see title) having a battery 3, an ignition switch 4, a light emitting element 5 connected in series with the switch 4, a resistor 141 for limiting current flowing through light emitting element 5 (column 6, lines 10-15) and the resistor being disposed between a transistor 140 and input terminal T3 (see figure 1).

However, Sada et al does not disclose using LED for a light emitting element.

On the other hand, Beyn discloses for the purpose of providing desirable safe operating conditions for alternator systems, a battery 24, a switch 42, a light emitting diode 46 connected to a current limiting resistor 60 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage control apparatus as disclosed by Sada et al and to modify the invention by using an LED for the purpose of providing desirable safe operating conditions for alternator systems as disclosed by Beyn.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sada et al in view of Mashino.

Sada et al discloses a voltage control apparatus for a vehicle (see title) having a battery 3, an ignition switch 4, a light emitting element 5 connected in series with the switch 4, a resistor 141 for limiting current flowing through light emitting element 5 (column 6, lines 10-15) and the resistor being disposed between a transistor 140 and input terminal T3 (see figure 1).

However, Sada et al does not disclose explicitly having a voltage detector circuit.

On the other hand, Mashino discloses for the purpose of providing an inexpensive way of controlling the voltage of a generator and reduce fluctuation of the characteristics of the magnetic circuit of generators, a circuit for detecting the voltage of a control apparatus (see abstract & column 2, lines 19-23, 48-51).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage control apparatus as disclosed by Sada et al and to use a voltage detection circuit for the purpose of providing an inexpensive way of controlling the voltage of a generator and reduce fluctuation of the characteristics of the magnetic circuit of generators as disclosed by Mashino.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sada et al and Mashino as applied to claim 4 above, and further in view of Beyn.

The combined voltage apparatus discloses all of the elements above. However, the combined voltage apparatus does not disclose using an LED as light emitting element.

On the other hand, Beyn discloses for the purpose of providing desirable safe operating conditions for alternator systems, a battery 24, a switch 42, a light emitting diode 46 connected to a current limiting resistor 60 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined voltage control apparatus as disclosed by above and to modify the invention by using an LED for the purpose of providing desirable safe operating conditions for alternator systems as disclosed by Beyn.

Response to Arguments

7. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

8. Claims 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In particular with regards to claims 3, the prior art fails to disclose that light emitting element is coupled through an ignition switch to a base terminal of an NPN transistor for starting an operation of the voltage control apparatus so that the light emitting element is turned on by a current flowing into the base terminal. With regards to claim 5, the prior art fails to disclose that after the circuit for detecting the voltage of the input terminal and starting the voltage control apparatus is shutdown after the vehicle generator starts electric power generation operation, an operation of a starting circuit for the voltage control apparatus is maintained by an output one phase of the vehicle generator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

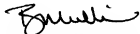
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

November 24, 2003


BURTON S. MULLINS
PRIMARY EXAMINER